

DO NOT ENTER

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Proposed Amendments to claims of US Patent Application No. ~~10/531,836~~ 10/551,836

Submitted to Examiner Theresa Thieu on October 22, 2008 via Facsimile
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Proposed claim amendment to be discussed during telephone interview scheduled
for October 28, 2008 at 2:00 pm EST

Claim 1 (currently amended). A double-screw compressor for supplying gas to a gas consumer and comprising two interacting rotors for compressing the gas and a toothed gearing, which toothed gearing comprises:

- a. a housing with two opposite end walls which are made of a first material,
- b. two parallel gearwheel shafts, which are each connected to one of the rotors and mounted rotatably in the opposite end walls with a nominal center distance,
- c. two interacting gearwheels which are fixed on a respective gearwheel shaft and made of a second material, each gearwheel having involute teeth corresponding to one another designed so as, when engagement between teeth on their respective wheels takes place, to form a nominal backlash between the teeth interacting during the engagement, when the gearwheel shafts are located at the nominal center distance from one another ^{ya pressure angle} and
- d. the first and second materials having different thermal expansion coefficients, characterized in that each of the gearwheels ~~is designed with~~ ^{has} ~~comprises one and the same nominal pressure angle~~ which is smaller than 15° in order to minimize the deviation of the actual backlash from the nominal backlash when the a center distance deviates from the nominal center distance as a consequence of a change in temperature of one of the parts included in the screw compressor.

Claim 8 (currently amended). A method of, in a double-screw compressor for supplying gas to a gas consumer reducing the effect of temperature variations of parts in the double-screw compressor on the functioning of the double-screw compressor, which double-screw compressor comprises two interacting rotors for compressing the gas and a toothed gearing, where:

- i. the toothed gearing is designed with:
 - (1) a housing with two opposite end walls which are made of a first material,
 - (2) two parallel gearwheel shafts, which are each connected to one of the rotors and mounted rotatably in the opposite end walls with a nominal center distance,
 - (3) two interacting gearwheels which are fixed on a respective gearwheel shaft and made of a second material, each gearwheel having involute teeth corresponding to one another designed so as, when engagement between teeth on their respective wheels takes place, to form a nominal backlash between the teeth interacting during the engagement, when the gearwheel shafts are located at the nominal center distance from one another, ~~and~~ ^{a pressure angle} -----
- ii. the first and second materials are selected so that they have different thermal expansion coefficients, characterized in that
- iii. the pressure angle of the gearwheels is ~~adapted~~ ^{adapted} within the range 0° to 15° in order to minimize the deviation of the actual backlash from the nominal backlash when ~~the~~ ^a center distance deviates from the nominal center distance as a consequence of a change in temperature of one of the parts included in the screw compressor.

Claim 9 (canceled).